DWP Department for Work and Pensions

Financial Assistance Scheme
Pension Protection and Stewardship Division

7th Floor
Caxton House
6-12 Tothill Street
London
SW1H 9NA

Our phone number 0207 449 7404
Our fax number 0207 449 7127
Website www.dwp.gov.uk

Date: 28 January 2010

Dear Sir or Madam

Consultation on the proposed revision to the Financial Assistance Scheme synthetic buy-out basis

The Financial Assistance Scheme (FAS) provides financial assistance to members of certain occupational pension schemes who have lost part or all of their defined benefit pensions as a consequence of their scheme ending without having enough money to pay benefits in full.

The Government announced an extension to the FAS in December 2007 that would ensure benefits paid by the FAS would be broadly comparable to those paid by the Pension Protection Fund (PPF). This extension would be funded in part by bringing in the residual assets of certain FAS schemes. The changes have been introduced in stages. First, FAS Payments were increased in early 2008, and most recently changes were made in July 2009 to further enhance benefits and to transfer responsibility for the management of the scheme to the Board of the PPF.

The Government has recently laid draft Regulations to complete the extension of FAS by enabling the transfer of certain qualifying pension schemes' assets to government. Some beneficiaries of schemes that are transferring assets would have received more than FAS provides as standard had their scheme wound up by annuity purchase rather than by transferring assets. The draft Regulations provide for appropriate payments to be made to such beneficiaries.

To help ensure that such beneficiaries are appropriately protected, the Government is taking this opportunity to consult on related changes to the FAS synthetic buy-out basis ('the basis') that seeks to provide an estimate of the amount of bulk annuity that could have been secured for a cash sum from an insurer. The basis was last reviewed early in 2008 and is based on the market in 2007.

The basis underlies all actuarial factors used by the FAS in calculating FAS payments, for example, in order to allow deductions to be made to FAS payments where members have taken a lump sum from their scheme or to reduce ongoing FAS payments where members have been overpaid.

Recent changes to the annuity market have been reflected in recent changes to the synthetic basis used by the PPF. The Government is proposing to change the FAS basis to reflect the basis recently adopted by the PPF. Use of this revised basis will also help ensure payments made by the FAS and PPF are more closely aligned.

As the change to the basis could impact on current and future FAS recipients' Assistance payments, the consultation seeks views on the application of the revised basis in FAS calculations, for example whether it should be applied to calculations in all FAS cases, or limited to those cases which have yet to come into payment.

The Government is conducting a parallel consultation on draft guidance to support the transfer of assets (for example on how actuaries should allocate scheme assets between members). That consultation can be found on the Department for Work and Pensions (DWP) website at www.dwp.gov.uk/consultations and www.dwp.gov.uk/fas

Target audience

The consultation is technical in nature and is primarily aimed at pension industry professionals and others with an interest in defined-benefit occupational pension schemes. However, the Government is mindful that the matters covered in this consultation will affect the payments made to FAS beneficiaries. Therefore, the Government would welcome feedback from those who may be affected and their representatives.

Where can I find the consultation document?

The consultation document is available on the Department for Work and Pensions (DWP) website at www.dwp.gov.uk/consultations and www.dwp.gov.uk/fas .

The Government is conducting a parallel consultation on draft FAS guidance to support the transfer of assets (for example on how actuaries should allocate scheme assets between members). This consultation is also available on the DWP website on the links specified above.

Timing

The consultation period begins on 28 January 2010 and runs until 10 March 2010.

A consultation period of six weeks is in line with DWP practice in relation to limited technical consultations.

How can I respond to the consultation?

The Government would be grateful for your comments on any of the points covered in this document. Please ensure that your response reaches us by the closing date.

A list of those to whom this document has been sent is attached. If you have any suggestions of others who may wish to be involved in this process, please contact us.

Please send consultation responses to:

Post Financial Assistance Scheme Consultation
Pensions Protection and Stewardship Division
Department for Work and Pensions
Caxton House
7th Floor
6-12 Tothill Street
London SW1H 9NA

Email caxton.fas-responses@dwp.gsi.gov.uk

When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation please make it clear whom the organisation represents and (where applicable) how the views of members were assembled.

All information contained in your response, including personal information, may be subject to publication or disclosure if requested under the Freedom of Information Act 2000. By providing personal information for the purpose of the public consultation exercise, it is understood that you consent to its disclosure and publication. If this is not the case, you should limit any personal information which is provided, or remove it completely. If you want the information in your response to the consultation to be kept confidential, you should explain why as part of your response, although we cannot guarantee to do this. We cannot guarantee confidentiality of electronic responses even if your IT system claims it automatically.

If you want to find out more about the general principles of Freedom of Information and how it is applied within DWP, please contact:

Post Charles Cushing
Adjudication and Constitutional Issues
Department for Work and Pensions
Information Policy Division, Freedom of Information Unit
1-11 John Adam Street
London WC2N 6HT

Phone 0207 962 8581

Email charles.cushing@dwp.gsi.gov.uk or carol.smith14@dwp.gsi.gov.uk

More information about the Freedom of Information Act can be found on the website of the Ministry of Justice.

What will we do after the consultation?

A summary of responses (including the next steps to be taken) will be published online (and linked from the same web page as above). Paper copies will be available on request.

The consultation process

We value your feedback on how well we consult. If you have any comments on the process of this consultation (as opposed to the issues raised) please contact our Consultation Coordinator:

Post	Roger Pugh Consultation Coordinator Department for Work and Pensions Room 2A, Britannia House 2 Ferensway Hull HU2 8NF
Phone	01482 609571
Email	roger.pugh@dwp.gsi.gov.uk

Yours faithfully

Andy Maggs

Policy and Legislation, Financial Assistance Scheme

Email andrew.maggs@dwp.gsi.gov.uk

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The Law Society
The Law Society of Scotland
The Pensions Advisory Service
The Pensions Management Institute
The Scottish Executive
The Society of Pension Consultants
The Welsh Assembly
Trades Union Congress
UNISON
Unite the Union

Notification of the consultation has also been sent to members of the FAS advisory panel, actuarial consultancy firms that provide advice to FAS schemes, private individuals who have expressed an interest in participating in the consultation exercise, and respondents to related consultations undertaken by DWP.

Strategy, Information and Pensions

Revision to the Synthetic Buy-out Basis

The Financial Assistance Scheme

CONSULTATION 2010

Revision to the Synthetic Buy-out Basis

The Financial Assistance Scheme

Consultation 2010

Contents

Revision to Synthetic Buy-out Basis

Introduction

1. The Financial Assistance Scheme (FAS) provides financial assistance to members of certain occupational pension schemes who have lost part or all of their defined benefit pensions as a consequence of their scheme winding-up without having enough money to pay benefits in full. Assistance is currently provided up to a specified limit in the form of supplementary payments that top-up annuities purchased by scheme trustees as part of the scheme wind-up process.

2. Draft Regulations have recently been laid before Parliament that extend the FAS by providing for assets of certain FAS schemes to transfer to government (‘The Financial Assistance Scheme (Miscellaneous Amendments) Regulations 2010 (‘the draft Regulations’)). The draft Regulations provide for valuations of relevant scheme assets and liabilities to be undertaken and for payments relating to those assets to be calculated and made by the FAS.

3. This consultation contains proposals for revisions to the synthetic buy-out basis (‘the basis’) and the actuarial factors used to calculate FAS payments. It also contains proposals in respect of the basis that will be used by actuaries in calculating liabilities for valuations in schemes in line with the draft Regulations.

4. The current basis underlies certain actuarial calculations used in calculating FAS payments (for example in order to make deductions to FAS payments where members have taken lump sum payments from their schemes). In so doing, the basis seeks to provide an estimate of the amount of bulk annuity that could have been secured for a cash sum from an insurer.

5. This consultation document proposes a revision to the basis to reflect recent changes in the bulk annuity buy-out market. The detail of the changes is provided in **Annex A.**

6. The change to the basis will have different impacts on different members depending on their circumstances. This consultation seeks views on this issue and the Government’s proposal that the revised basis will **not** be used in all cases, for example, where a payment has already been made from the FAS and the earlier basis was used in the calculation of that payment.

7. This consultation provides examples to demonstrate the effects of the revised basis on FAS payments in **Annex B**. Proposals are also made for the preservation of certain actuarial factors in current use in calculating FAS payments and for the future review of factors used by the FAS.

8. Tables of illustrative factors[1] derived from the revised FAS basis are found in **Annex C** to this consultation document.

Consultation on FAS valuation guidance

9. A second consultation, published in parallel with this consultation, seeks views on draft guidance relating to FAS valuations covering:

   - Information on the preparation of relevant accounts (including guidance on valuing particular assets and permitted actuarial adjustments);
   - Draft guidance on the calculation of asset shares (and calculation examples);
   - Draft guidance to the completion of the valuation data template; and
   - Draft guidance on how expected pension data should be provided by schemes transferring assets to ensure FAS payments are calculated on an equalised basis.

10. The consultation on the draft guidance is available on the DWP website at www.dwp.gov.uk/consultations and www.dwp.gov.uk/fas .

[1] As described in **Annex A**, the proposals include a change to the way in which market values are reflected in actuarial factors. This change means that actual factors derived from the revised basis will not be available until the yield used to calculate them is known. Illustrative factors are therefore used to demonstrate potential effects.

List of consultation questions

Q1) The Government welcomes views on its proposals to adopt the PPF basis for valuations under section 179 with an effective date on or after 31 October 2009 for FAS purposes.

Q2) The Government welcomes comments on the suitability of the PPF section 179 basis (with the post-97 indexation assumption adjustment) for FAS purposes.

Q3) The Government welcomes views on its proposal that wherever an actuarial factor has been used in a beneficiary's payment before the new basis is introduced, the original actuarial factor will continue to be applied whenever new circumstances mean payments need to be revisited.

Q4) The Government also welcomes views on its proposal that if a beneficiary's payment needs to be revisited after the basis is revised (for example because of an incorrect calculation), or if contingent (i.e. dependent's) payments are calculated in respect of the member, then any actuarial adjustment necessary in calculating the new payment should be applied on the same basis as the original calculation.

Q5) The Government welcomes views on whether it is appropriate to continue to apply the same ill-health adjustment factor when members move from Interim Ill-Health Payments to final Ill-Health Payments.

Q6) The Government welcomes views on this proposal to maintain the current basis when calculating notional annuities in relation to any scheme payments made before the basis is revised.

The consultation period runs from 28 January to 10 March 2010.

Author(s) contact details

Financial Assistance Scheme Consultation
Pensions Protection and Stewardship Division
Department for Work and Pensions
Caxton House
7th Floor
6-12 Tothill Street
London SW1H 9NA

caxton.fas-responses@dwp.gsi.gov.uk

Revision to Synthetic Buy-out Basis

The need for a synthetic buy-out basis

11. The FAS currently operates as a top-up payment system. Schemes which wind-up will generally secure member benefits through an annuity, a transfer payment or a winding-up lump sum with the member's share of the remaining scheme assets. Where these payments are worth less than 90 per cent of the member's accrued pension (subject to a cap) the FAS makes a top-up payment to bring overall payments up to 90 per cent. FAS payments are generally made from a member's normal retirement age (NRA). FAS payments are also made to eligible survivors and surviving dependants of qualifying members.

12. The FAS uses a synthetic buy-out basis in order to take various payments made by schemes to members into account. For example, if a member has taken a pension commencement lump from their scheme during wind-up then FAS turns that lump sum into a rate of 'notional annuity' that could have been secured with an insurer and the notional annuity is subtracted from the payment that would otherwise be made by FAS. In this way a FAS top-up payment can be calculated for such members in a manner consistent with FAS payments that top-up actual annuities.

13. In other cases, where a member's share of scheme assets is small, members may have had their entire rights in their pension schemes extinguished in return for a lump sum payment called trivial commutation or a 'winding-up lump sum'. Some other members may have had their scheme assets transferred to the National Insurance Fund in return for full or partial elimination of the deduction from their state additional pension (SERPS / S2P) relating to contracted-out membership in their schemes. In other cases members may have taken transfer payments from their schemes. In all such cases the 'notional annuity factors' are used to help determine current FAS payments by turning the cash sum into a rate of notional annuity.

14. Actuarial factors are also used in current FAS operation to:

    - Adjust pension tranches payable by a scheme at an age other than NRA so that FAS payments can be made at a single NRA;
    - Reduce Assistance payments when a member takes early FAS payment in circumstances of ill health;
    - Adjust components of pension that are only paid for a temporary period (often bridges paid to men between NRA at 60 and age 65 when they start receiving their state pension) so that they are smoothed out when taken into account for the calculation of Assistance; and
    - Spread the recovery of excess payments over a beneficiary's lifetime

15. All such actuarial factors are derived from the current FAS synthetic buy-out basis.

The use of the synthetic buy-out basis in future FAS operation

16. The draft Regulations provide for assets of certain FAS qualifying schemes which have yet to complete wind-up to transfer to government rather than be used to purchase annuities for beneficiaries. When, Parliament permitting, those draft Regulations come into force and assets transfer to government, beneficiaries in relevant schemes will receive sole payment from FAS, rather than a payment from their scheme and a top-up payment from FAS.

17. If affected schemes had continued to wind-up by purchasing annuities, some beneficiaries would have received more than the 'standard' payments that FAS provides. Typically such beneficiaries would be those in receipt of their pension before the scheme started to wind-up who are generally afforded higher protection under statutory rules. Many such beneficiaries would have stood to receive their full scheme pension by way of an annuity.

18. To protect the interests of such beneficiaries, the draft Regulations provide for valuations of assets and liabilities ('FAS valuations') to be undertaken in respect of relevant schemes and for individual asset shares to be calculated for scheme beneficiaries. The FAS scheme manager will then calculate a 'Notional Pension' that is intended to approximate the pension that could have been secured for the beneficiary with their share of scheme assets. The Notional Pension will be compared with the payment that the FAS would pay as standard to the beneficiary and the beneficiary will receive the higher amount.

19. The draft Regulations also provide for certain members to take part of their FAS Assistance payment as a lump sum[2]. The amount of lump sum members will be able to take will be limited by reference to the Notional Pension determined for them and their ongoing FAS payments (and the payments to any survivors or surviving dependants) will be reduced to account for any lump sum taken.

20. In order for the FAS scheme manager to calculate a Notional Pension and thus test whether beneficiaries are funded above FAS levels it is necessary to use the synthetic buy-out basis to approximate the amount of bulk annuity that could have been secured for the beneficiary. Actuarial factors derived from the basis will also be required in order to make appropriate adjustments to ongoing payments where members take lump sums by commuting part of their payment.

21. In addition, in many cases under relevant winding-up legislation, the cost of buying annuities (the 'buy-out cost') is used by actuaries to determine the value of certain pension liabilities when allocating scheme assets. Thus, when undertaking a valuation for FAS purposes, actuaries will also need to value certain liabilities in line with a buy-out cost. As the FAS schemes transferring assets to government will not be securing annuities, actual buy-out costs will not generally be available. Because of this, and to ensure consistency between schemes, the Government will set out the basis for use by actuaries undertaking FAS valuations.

[2] Members are eligible for a FAS lump sum at normal retirement age if, at the point the scheme assets transfer to Government, the member has yet to receive a pension payment from their scheme.

22. Legislation does not prescribe that consultation is required on the basis or any of the actuarial factors used by the FAS. However, the Government considers that consultation is appropriate, particularly in order to seek views on whether the underlying basis for the factors is reasonable.

Reviewing the basis

23. The FAS basis was last reviewed early in 2008. At that time a basis calculated in 2007 in the context of FAS cost modelling was adopted. A consultation document setting out the reason for the 2008 change and the basis adopted then is available on the DWP website:

    http://www.dwp.gov.uk/docs/revision-of-annuity-factors-in-fas.pdf

24. The Government wishes to ensure that the outcomes for members in respect of whom assets are transferred to government are broadly consistent with the outcomes they could have expected had their schemes instead wound up by annuity purchase. Because of this, the Government considered it appropriate to review the FAS basis to ensure that it reflects recent market conditions.

Q1) The Government welcomes views on its proposals to adopt the PPF basis for valuations under section 179 with an effective date on or after 31 October 2009 for FAS purposes.

25. As well as ensuring that the basis reflects recent market conditions, the Government considers that adopting a basis aligned with the PPF will help ensure consistency between payments made by the two bodies. Having a consistent basis will also lend itself to future operational efficiencies (by for example, facilitating simultaneous reviews of the bases and for consequential changes to IT and supporting processes to be undertaken at the same time).

26. To ensure consistency between members who have different factors applied to them and between members of schemes whose assets are transferred to government and those whose assets are discharged, the Government intends that the same actuarial basis will be used for all current and future FAS actuarial functions (with the limited exceptions described later in this document relating to preserving actuarial factors where payments are already being made to beneficiaries).

The Pension Protection Fund (PPF) Section 179 basis

27. The PPF Board sets a synthetic buy-out basis to enable PPF-eligible schemes to undertake valuations that demonstrate their funding position in accordance with section 179 of the Pensions Act 2004. Under section 179 the funding position of ongoing schemes relative to the cost of securing benefits equivalent to those provided by the PPF is established. Valuations under section 179 affect the amount of levy payable by the scheme.

28. The PPF Board undertakes regular reviews of its buy-out basis. In April and July 2009 it gathered evidence on the prices that bulk annuity providers were charging at that time. As a consequence of evidence of market change, the PPF Board consulted on a change to the basis in July 2009. Following that review, the Board adopted a revised basis with effect from 31 October 2009.

29. The PPF Valuation Regulations 2005 (S.I 2005/672) specify that the liabilities calculated under a section 179 valuation should reflect the "estimated cost of securing scheme benefits … for the member by means of an annuity purchased at the market rate". Therefore the section 179 basis must reflect market bulk annuity prices which reflects the Government's intention for the FAS basis.

30. One of the additional principles that the PPF applies when selecting its basis is to err on the side of understating liabilities. However, the intention is that the basis that is ultimately selected is nonetheless one that would produce a buy-out cost that a pension scheme could realistically be able to achieve. Aiming at the low end of liabilities would also reflect the actions of trustees buying out their liabilities who would, all other things being equal, accept the lowest quote available for a given set of liabilities. Therefore, the Government does not consider that the application of this principle is incompatible with the purpose of the buy-out basis for FAS purposes.

31. The PPF section 179 basis and the reasons for selecting each component of the basis are described in the consultation document published by the PPF in July 2009 and the response to the consultation published in October 2009:

http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/s143_and_s179_assumptions_july_2009_consultation_doc.pdf.

http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/assumptions_consultation_response_Oct09.pdf

32. The new **PPF Section 179 Assumptions Guidance** was published in October 2009 and is available here:

http://www.pensionprotectionfund.org.uk/DocumentLibrary/Documents/Section_179_Assumptions_Guidance_vA5_Oct09.pdf.

Differences between PPF bases

33. The PPF applies a different buy-out basis under section 143 of the Pensions Act 2004. Section 143 applies to schemes that are in a PPF assessment period (in which, following employer insolvency, schemes are tested to see whether they may qualify for PPF compensation). Schemes use the section 143 buy-out basis to establish whether they may be funded above PPF levels and thus whether they may be able to buy-out benefits above those that PPF provides.

34. The only difference between the current section 143 and 179 PPF bases is that the section 143 basis has a more complicated mortality assumption which applies different assumptions depending on the size of the pension being valued. The purpose of this is to simulate the way in which an insurer will apply

different mortality assumptions to different scheme members depending on a variety of characteristics such as pension size and even postcode.

35. The section 143 basis provides a more precise estimate in order to ensure that a scheme in the assessment period does not transfer to the PPF if benefits at least equal to the compensation provided by the PPF could have been secured with an insurer. The section 179 basis is simpler because consistency and simplicity matter more for section 179 purposes than a high level of precision.

36. The simpler section 179 mortality assumptions have been proposed for FAS purposes to avoid further complexity in valuation requirements and to help ensure consistency between the FAS valuation basis and the basis for FAS actuarial factors.

Changes required to the FAS basis to align with PPF section 179 basis

37. **Annex A** describes the proposed changes to the FAS basis and the proposed financial assumptions. There are a number of technical adjustments to the section 179 basis which need to be made for the particular circumstances of the FAS which are described in **Annex A**. The only difference between the PPF basis and the proposed revised FAS basis which will affect comparable actuarial factors used by the two bodies is the assumption on the proportion of members' post-1997 service.

38. Different assumptions in relation to post-97 service are applied to reflect the fact that FAS schemes are already in wind-up and some will have been in wind-up for some time. In contrast, PPF is open to ongoing as well as closed schemes. This means that it is more likely that FAS members will have lower proportions of post-97 service than PPF members.

Q2) The Government welcomes comments on the suitability of the PPF section 179 basis (with the post-97 indexation assumption adjustment) for FAS purposes.

Effect of proposed changes on asset shares and notional pensions

39. FAS valuations will be undertaken in line with existing statutory and scheme rules that set out the order in which assets must be allocated against liabilities. Under statutory rules certain liabilities are valued on a 'full buy-out' basis. Where such values apply in FAS schemes that transfer assets the proposed buy-out basis will have an effect on the amount of assets allocated to beneficiaries.

40. Relevant liabilities calculated on the proposed FAS basis are lower than would be calculated on the current FAS basis. The effect of this on asset shares is to

reduce the asset shares for members whose liabilities fall relatively high in the priority order (typically pre wind-up pensioners) and increase those for members whose liabilities fall relatively low in the priority order (typically members who had not started to receive their pension before the start of wind-up). The total amount of asset shares remains the same as this is based on the assets of schemes and does not depend on the actuarial assumptions used.

41. The size of Notional Pension calculated for a given asset share will be higher on the proposed assumptions than it would have been on the existing basis. For a member who is fully-funded, the reduction in asset share is very largely offset by the improvement in Notional Pension terms. A fully-funded member with a non-increasing scheme pension would find the Notional Pension exactly the same under both bases. Members with increasing scheme pensions would have slightly different Notional Pensions on the two bases.

42. Members who are less well funded would have a higher Notional Pension under the proposed basis than if the existing basis were used. This may increase any lump sum that they would be eligible to receive from FAS. It would not affect the overall level of Assistance.

43. Members whose funding level is close to or above 90 per cent but who are not fully funded are likely to receive a higher level of Assistance if their asset share and Notional Pension are calculated under the proposed basis.

Effect of basis change on actuarial factors

44. As described in **Annex A**, the proposals to the FAS basis include a change to the way in which market values are reflected in actuarial factors. The actuarial factors will now be based on market yields on a set date. The final factors will not be known until the yield used to calculate them is known. **Annex C** contains illustrative factors to demonstrate the potential effects of the proposed FAS basis on the actuarial factors assuming that the appropriate fixed-interest market yield is 4.5 per cent a year and the appropriate index-linked market yield is 1 per cent a year.

45. **Annex B** contains a table setting out the anticipated impacts of the change in the basis on actuarial factors and consequently Assistance payments. The annex also sets out some potential scenarios where the actuarial factors may be used. The examples highlight the impact on member's Assistance of using the illustrative factors in **Annex C** compared to those currently in use in the calculation of Assistance. The effect of the final factors will depend on the yields used to calculate them. Examples 4A and 4B may be of particular interest as they show how the basis affects:

    - the asset shares allocated to members;
    - the Notional Pension derived from asset shares; and
    - the amount that may be commuted.

46. It should be noted that examples 4A and 4B are designed to show the range of outcomes that may arise as a consequence of the revision to the basis. As such the members present reasonably extreme cases and in practice it is expected that most members will fall somewhere between these extremes.

Proposals for preserving actuarial factors applied for past payments

47. There are various circumstances in which beneficiaries will already be in receipt of FAS payments when the basis is changed and where those payments will need to recalculated due to a change in circumstances. For example, the FAS makes temporary payments called Initial Payments whilst schemes are still winding-up. Payments are then recalculated as final payments (called 'Annual Payments') when schemes complete wind-up.

48. It should also be noted that FAS payments to dependants of members are based on the pensions accrued by members in their schemes and FAS payments may already have been made to those members while they were alive.

49. The basis is being revised as a consequence of recent movements in the bulk annuity market. Until the basis is changed the Government considers that FAS payments calculated on the current basis are in line with appropriate actuarial assumptions. **The Government therefore proposes that on the introduction of the revised basis, wherever an actuarial factor had been used in a beneficiary's payment, the original actuarial factor will continue to be applied whenever new circumstances mean payments need to be revisited (for example where members move from Initial Payments to final Annual Payments).**

50. In addition, the Government proposes that **if a beneficiary's payment needs to be revisited after the basis is revised (for example because of an incorrect calculation), or if contingent (i.e. dependent's) payments are calculated in respect of the member, then any actuarial adjustment necessary in calculating the new payment should be applied on the same basis as the original calculation.**

51. It should be noted that the use of a 'current' or a 'revised' annuity factor may increase or decrease the amount of payment a member receives depending on the particular function of the actuarial factor. For example, the FAS pays at a single NRA but recognises that some members have accrued pensions payable at different ages. To reflect the value of different tranches of pension, tranches accrued at an age below NRA are increased in the calculation of the member's payment whilst tranches accrued to an older age are reduced.

52. The illustrative factors shown in this document would result in a lower increase for tranches accrued by reference to an age before NRA (hence lower Assistance payments) but also a higher increase for later aged tranches (hence higher Assistance payments). The effect on the individual member would

depend on the proportion of pension accrued by reference to particular ages and any other factor that may be used in the calculation of their payment. The effect of the final factors will depend on the yields used to calculate them.

Q3) The Government welcomes views on its proposal that wherever an actuarial factor has been used in a beneficiary's payment before the new basis is introduced, the original actuarial factor will continue to be applied whenever new circumstances mean payments need to be revisited.

Q4) The Government also welcomes views on its proposal that if a beneficiary's payment needs to be revisited after the basis is revised (for example because of an incorrect calculation), or if contingent (i.e. dependent's) payments are calculated in respect of the member, then any actuarial adjustment necessary in calculating the new payment should be applied on the same basis as the original calculation.

Reduction factors when considering early access to FAS on the grounds of ill-health

53. Where a scheme member is unable to work due to ill health and it is not expected that their situation will change before normal retirement age, FAS Assistance can be paid up to five years earlier than the member's NRA, but at a reduced rate to reflect that their early retirement means that FAS Assistance will be in payment for longer.

54. In the past, the Government's view has been that reduction factors used in ill-health payments should be preserved because of the active choice that members make in order to take up such payments. Thus, when changes to the ill-health factors were made in January 2009, those changes excluded members who were already receiving actuarially reduced Ill-Health Payments. This protection was also extended to final Ill-Health Payments where members had been in receipt of Initial Payments on ill health grounds (termed 'Interim Ill-health Payments').

55. In line with the other preservation proposals, **the Government proposes to maintain this approach and to preserve ill-health reduction factors when members move from Interim Ill-Health Payments to final Ill-Health Payments when the revised buy-out basis is introduced**.

56. It should be noted that, based on the illustrative factors shown in this document, this proposal to continue to apply the same the ill-health reduction factor would **not** tend to favour the member (i.e. would lead to lower payments than would be made if revised factors were used), as the current basis would provide for a higher reduction for early payment than the revised basis. Example 5 in **Annex B** illustrates the potential impact on Assistance.

Q5) The Government welcomes views on whether it is appropriate to continue to apply the same ill-health adjustment factor when members move from Interim Ill-Health Payments to final Ill-Health Payments.

Notional Annuity Factors

57. Notional annuity factors are used to help determine the 'actual pension' (i.e. the amount deducted to represent the pension received from the scheme) for Initial Payments and Annual Payments in circumstances where the member had taken a lump sum or a transfer or other discharge payment from their scheme. (Example 1 in **Annex B** shows how this calculation is applied).

58. The purpose of notional annuity factors is to estimate the amount of bulk annuity that could reasonably have been purchased for a beneficiary **at the time the transfer or lump sum was paid to the beneficiary**. Given this purpose it would not seem appropriate for the revised basis to apply in respect of any payments made by schemes to members before the basis is revised (whether lump sums, transfers, or other discharge payments).

59. **The Government proposes to maintain the current basis when calculating notional annuities in respect of any relevant payment made by a scheme to a beneficiary before the basis is revised.**

60. As noted in example 1 in **Annex B**, the revised basis will, in almost all cases, lead to higher notional annuities and thus to lower Assistance payments. Thus this proposal will tend to benefit members who would otherwise be affected by a change to the basis.

Q6) The Government welcomes views on this proposal to maintain the current basis when calculating notional annuities in relation to any scheme payments made before the basis is revised.

Introduction of indexed actuarial factors

61. In July 2009, the FAS rules were changed so that indexation would be included in FAS payments in respect of any post-97 service that members had accrued within their schemes. As part of this change actuarial factors were re-calculated to allow for indexation.

62. Since July 2009, payments have been reassessed for beneficiaries on a rolling basis as and when relevant information has been provided by schemes. Not all information has yet been received and thus not all beneficiaries have yet been reassessed. Thus there may be some members who have not been reassessed when the basis is changed and for whom notional annuity factors have been used in the calculation of Assistance.

63. To help ensure any members who have not yet been reassessed are treated consistently with other members receiving payments derived using notional annuity factors, **the Government proposes the current indexed notional annuity factors will apply when such members' calculations are revisited**.

Proposals for future reviews of the FAS basis and actuarial factors

64. The Government anticipates retaining the FAS basis and all actuarial factors derived from the basis for at least two years after the change to the basis is made, to reflect timescales over which schemes will be expected to transfer assets and for operational convenience. However, during this period the Government will be mindful of reviews that PPF will undertake to their section 143 and section 179 bases and may choose to review the FAS basis within this period, particularly if evidence collected by the PPF points to significant market shift.

65. Most of the actuarial factors that will be used by the FAS if the draft Regulations come into force are time-limited, as they relate to the wind-up of schemes and the transfer of assets. However, commutation factors, ill health reduction factors and the adjustments made to tranches of pension to allow for payment from NRA, will be continually employed until the last FAS payments are determined.

66. Once the asset transfer period has ended, the Government proposes that commutation and ill health reduction factors will be reviewed on an ongoing basis (potentially in line with future reviews undertaken on the PPF bases). The Government considers that due to the voluntary nature of commutation and ill-health payments it is important that relevant actuarial factors reflect prevailing market rates. The same considerations do not apply to tranching adjustment factors and retaining these factors once revised will help ensure consistency of calculations (particularly as the tranching factors may be used in schemes' calculation of members' accrued pensions in line with proposals in the parallel consultation on the provision of equalised expected pension data). For these reasons the Government does not propose to review the tranching factors once the asset transfer period has ended.

Forecasts issued before members receive FAS payments

67. In future, deferred members will be issued with a forecast of the FAS payments that they will receive once they reach FAS entitlement age including the option of commutation. The forecasts will be based on the latest available factors at the time they are issued.

68. The Government proposes to use the latest commutation factors available at the point of retirement when calculating actual payments for these members and those factors may be different from those used in earlier forecasts.

69. The Government will ensure that forecasts provided to members make clear that payments may be subject to change if factors are subsequently revised.

Annex A

Proposed changes to the FAS basis

Financial assumptions methodology

1. The financial assumptions used for FAS valuations and factors are based on market yields available on a number of indices of UK Treasury bonds (Gilts). An adjustment is then applied to the yields to reflect more closely the financial assumptions that a bulk annuity provider would use in practice.

2. The way that gilt yields are proposed to be used in the calculation and the date that they are selected is different for FAS valuations, notional annuity factors and other factors.

3. The format of the proposed financial assumptions for FAS valuations and calculation of Notional Pensions is that they are based on market yields at the date of the valuation. Under these functions, the required adjustments are made to the yield before the Valuation Actuary calculates liabilities or the FAS scheme manager calculates Notional Pensions.

4. The proposed approach for the other actuarial factors is slightly different. The financial assumptions for all the actuarial factors will be based on market yields on the gilt indices used for the FAS valuation but at a particular set day and with the same uniform adjustments made to those yields.

5. The Government intends to use the same set date for yields for relevant FAS actuarial factors as the PPF uses to help ensure consistency with the PPF basis and thus to help ensure consistency between payments made by the two bodies.

6. It is proposed that notional annuity factors will be based on the same adjusted yields as other factors but have a further adjustment made to them (the “Market Value Adjustment”) to ensure that they are in line with market rates on gilts at the date the lump sum or transfer value that is being notionally converted into an annuity rate was paid. This mirrors the current FAS approach to notional annuities. The PPF does not have actuarial factors that perform an equivalent function.

7. The purpose of the adjustments to the gilt yields referred to in paragraph 1 is to reflect more closely the financial assumptions that a bulk annuity provider would use in practice. The adjustment could be upwards which might reflect the fact that the investments that the bulk annuity provider makes to back the annuities may include stocks such as corporate bonds which have a higher yield than gilts. Conversely, the adjustment may be downwards to reflect the cost of risks that the bulk annuity provider is exposed to as a result of providing an annuity.

8. The existing FAS approach is to calculate the factors on central yields both before and after retirement, with “Market Value Adjustment” factors applied to

notional annuity factors to allow for actual market conditions on the date the lump sum was paid. The central yield chosen is expected to be close to market yields for the period that the factors are going to be used for.

9. The existing FAS factors are calculated using central yields of 4.5 per cent for fixed interest and 2 per cent for index-linked gilts, respectively. The central yields are selected as being an estimate of what market yields are likely to be over the period that the factors are in use. If the current approach were retained, it would be likely that the central index-linked yield would be lowered to reflect recent market conditions. The Government proposes to change this approach and instead use market yields at the time the factors are calculated. This is consistent with the approach adopted by the PPF, will help ensure consistency in payments made by the two bodies and be administratively convenient.

10. This change in approach will have a very small impact on notional annuity factors which have a market value adjustment applied to them in any case. The effect of the change will be bigger on commutation, early retirement and tranching factors but will not be known until after the after the date at which these rates are to be selected. As shown in the examples in annex B, anticipated differences are however relatively small. There will be no effect on notional pensions which will be calculated based on yields at the calculation date.

11. The PPF section 179 basis requires assumptions for a limited number of rates of increase in deferment and payment. However, the basis for FAS valuations must be flexible enough to value a wide range of increases. Therefore, the assumptions are expressed in a different way in the FAS valuation guidance to the section 179 valuation guidance. However, when valuing one of the increases that might be valued in a section 179 valuation, the financial assumption derived on the FAS basis will be the same as the corresponding section 179 valuation assumption.

Changes to financial assumptions

12. The existing adjustments to gilt yields are to deduct 0.5 per cent a year from all gilt yields. The proposed adjustments are:

- minus 0.1 per cent a year to fixed-interest gilt yields in deferment;
- minus 0.3 per cent a year to index-linked gilt yields in deferment;
- plus 0.6 per cent a year to fixed-interest gilt yields in payment; and
- plus 0.1 per cent a year to index-linked gilt yields in payment.

13. All these changes would tend to decrease the liabilities calculated in comparison to the existing FAS basis.

14. In addition it is proposed to change the gilt yield used as a reference point for the discount rate in payment from the 10 year to the 15 year index.

15. The effect of the change to the reference yield depends on the way in which the yield available on gilts changes depending on the term of the gilt. In current conditions, the yield rises as the term increases so at the moment this change would tend to decrease liabilities.

16. The final component of the financial assumptions is the market yield that is used when calculating early retirement, tranching and commutation. The effect of this will not be known until after the date at which these rates are to be selected.

Allowance for expenses

17. The allowance included in the basis for an insurance company's benefit installation/ payment expenses of 2 per cent of liabilities remains unchanged. This is one area in which the PPF section 179 basis is different to the FAS valuation basis. The PPF calculates expenses as a flat-rate amount of money calculated based on the number of members and their ages. The reason for the different approach is that an across-the-board 2 per cent allowance is simpler when allocating these expenses to the priority classes in the asset share calculation and then calculating notional pensions. It is thus hoped that this approach will simplify the asset allocation calculations.

18. The PPF basis has a separate expense assumption for estimated wind-up expenses. This assumption is not required for schemes in FAS as those that complete wind-up simply incur their actual expenses while those transferring assets to government make an allowance for actual wind-up expenses in the FAS valuation.

19. There will be no expense allowance in the commutation factors. This is consistent with the approach that the PPF adopts when calculating commutation factors.

Mortality

20. Mortality assumptions can be divided into the base assumption which is the mortality at the start of a projection, and the improvements which describe how mortality rates are assumed to vary in the future.

21. The proposed base table mortality assumptions are the following standard tables:

    - Males: PCMA00; and
    - Females: PCFA00.

22. The proposed improvements are:

    - Males: medium cohort with a 1.25 per cent a year underpin; and
    - Females: medium cohort with a 1 per cent a year underpin.

23. The '00' series are the most commonly used standard mortality tables now used by bulk annuity providers, and the medium cohort is the most commonly used

improvement table. The overall assumption reflects the typical effect of mortality assumptions adopted by the relevant insurers.

24. When calculating actuarial factors, the starting year for mortality rates is also important. A starting year of 2010 is proposed for factors calculated on the proposed basis. This assumption is not required for section 179 valuations since the starting year for mortality rates will be the year of the valuation's effective date.

25. In general, the existing factors for pensioners and deferred members are based on assumptions for females. The reason for this is that there is little difference between the corresponding male and female factors and using female factors provides a small margin in favour of the member when notional annuity factors are being used. The exceptions are notional annuity factors for surviving dependants and inherited qualifying members where there are different sets of factors for men and women, and the bridging pension factors which are based on male assumptions since this is a benefit that is usually only paid to men.

26. Under the proposed assumptions, the deferred and pensioner notional annuity factors calculated under male assumptions are likely to be similar to those calculated under female assumptions. It is proposed that the factors adopted should be based on the average of the two. This is consistent with the approach that the PPF adopts when calculating commutation and early retirement factors.

Proportion married, with a civil partner or other dependant

27. The other proposed change to the basis is to reduce by five percentage points all the assumptions for the proportions married, with a civil partner or some dependant by 5 per cent. The assumptions depend on the sex of the member and whether the benefit structure being considered includes provision for partners other than spouses or civil partners.

Aspects of the basis remaining unchanged

28. Factors for early retirement and tranching assume a mixture of indexed and non-indexed assistance. The factors assume that 20 per cent of assistance is indexed, based on an analysis of data of FAS members that was used for the costing model. PPF early retirement factors assume a higher proportion of indexed compensation since members of PPF schemes have more accrual after 1997. There is relatively little difference between the early retirement and tranching factors that would be calculated assuming all indexed or all non-indexed assistance in these cases.

Proposed FAS Assumptions

	Proposed basis	Current FAS factors for comparison
Longevity		
Base table – males*	PCMA00	PMA92
Age-rating – males*	None	None
Projection – males*	Medium cohort	Long cohort
Underpin – males*	1.25% a year	2.0% a year
Base table – females *	PCFA00	PFA92
Age-rating – females *	None	None
Projection – females *	Medium cohort	Long cohort
Underpin – females *	1% a year	2.0% a year
Notes	For the factors, (deferred) annuity figures for 2010 are used	For the factors, (deferred) annuity figures for 2007 are used
Other demographic		
Proportion married	75% of males, 65% of females at NRA or earlier death.	80% of males, 70% of females at NRA or earlier death.
Proportion with a relevant partner (used for factors)	85% of males, 75% of females at NRA or earlier death.	90% of males, 80% of females at NRA or earlier death.
Age disparities	Husbands 3 years older than wives	
Guarantee	For the notional annuity and tranching factors, 5 year guaranteed death benefit, otherwise no guarantee	For the factors, 5 year guaranteed death benefit
Financial	Factors are calculated on market yields on a set date with adjustments as shown. Notional annuity factors will have an MVA applied to allow for actual market conditions on the date that the lump sum was paid. The FAS valuation will be carried out using market yields on the "calculation date" with adjustments as shown	Factors are calculated on "central" yields both before and after retirement with adjustments as shown. Notional annuity factors will have an MVA applied to allow for actual market conditions on the date that the lump sum was paid. The FAS valuation will be carried out using market yields on the "calculation date" with adjustments as shown

Market yield for pre-retirement discount rate	Annualised yield of FTSE Actuaries Government 20 year Fixed Interest Index	
Market yield for pre-retirement discount rate net of inflation	Average of FTSE Actuaries Government Securities Index-Linked annualised real yields over 15 years assuming 0% and 5% inflation	
Market yield for post-retirement discount rate	Annualised yield of FTSE Actuaries Government 15 year Fixed Interest Index	Annualised yield of FTSE Actuaries Government 10 year Fixed Interest Index
Market yield for post-retirement discount rate net of inflation	Average of FTSE Actuaries Government Securities Index-Linked annualised real yields over 5 years assuming 0% and 5% inflation	
Central assumption for unadjusted gross discount rate	Factors are calculated on market yields	4.5%
Central assumption for unadjusted discount rate net of inflation	Factors are calculated on market yields	2%
Pre-retirement adjustment to fixed-interest yield	-0.1%	-0.5%
Pre-retirement adjustment to index-linked yield	-0.3%	-0.5%
Post-retirement adjustment to fixed-interest yield	+0.6%	-0.5%
Post-retirement adjustment to index-linked yield	+0.1%	-0.5%
Central yield before retirement for factors	Factors are calculated on market yields	1.5%
Central yield after retirement for factors (flat assistance)	Factors are calculated on market yields	4.0%
Central yield after retirement for factors (indexed assistance)	Factors are calculated on market yields	1.5%
Proportion of assistance that is indexed (for early retirement and tranching factors)	20%	
Expenses	2.0% allowance in FAS valuations No allowance in factors	2.0% (so divide factors calculated without expenses by 0.98)

* existing factors are based on female annuity figures except bridging factors; proposed factors are based on the average of male and female annuity figures

Notes

1 The above table shows that the current and proposed FAS bases assume mortality improvements based on the “long cohort” and “medium cohort” projections, respectively, produced by the Continuous Mortality Investigation (CMI) of the UK Actuarial Profession. Annex B of the March 2008 consultation provides further explanation of this.

Annex B

Effect of Basis Change on Actuarial Factors

Anticipated effects on actuarial factors and Assistance payments

The table below describes the anticipated effects on calculation functions, actuarial factors and Assistance payments of the proposed revision to the basis. The effects are based on the illustrative factors in **Annex C.** The final factors will depend on the market yields that are used to calculate the factors and the factors will not be known until after the date at which these yields are selected. However, it is not expected that the final factors will differ sufficiently from the illustrative factors to alter the effects described in the table.

Actuarial factor function	**Effect of revised basis**
1. Valuing liabilities (and thus calculating asset shares)	More assets allocated to deferred members less to pensioners[3].
2. Payments to over 90%ers (notional pension payments)	More members categorised as over 90% and higher benefits awarded to those who are categorised as over 90% **Higher Assistance payments**
3. Notional Annuities (where members have taken lump sums or transfers **after** the revision to the basis)	Higher rates of annuity assumed for given amount of cash. **Lower Assistance payments**
4. Increasing tranches of ‘expected pension’ to later NRAs to enable payment at NRA	Smaller benefits for members with tranches of pension accrued before NRA. **Lower Assistance payments.**
5. Decreasing tranches of ‘expected pension’ to earlier NRAs to enable payment at NRA	Higher benefits for members with tranches of pension accrued before NRA. **Higher Assistance payments.**
6. Adjusting actual pension for reconciliation purposes (reclaiming excess payments over time)	Higher annual deductions. **Lower Assistance payments.**
7. Commutation (for deferred members funded below 25%)	Higher asset shares (thus more members funded above 25% of Assistance) but lower cash received per £1 of Assistance commuted **Higher lump sums overall** **Lower ongoing Assistance payments**
7a. Commutation (for deferred members funded above 25%)	Higher asset shares (thus more members funded above 25% of Assistance) Lower cash received per £1 of Assistance commuted **Lower lump sums overall** **Assistance unchanged**
8. Reducing payments in cases of ill health early access	Less reduction **Higher Assistance payments.**
9. Smoothing expected pensions in cases where bridges or step ups would apply to expected pensions under scheme rules.	**Higher Assistance payments.**

[3] Although more assets would be allocated to pensioners this should not be read as implying that such members would receive increased Assistance payments. The same basis is used for calculating notional pensions, so the notional pensions will be the same or very similar on either basis for members at the top of the priority order.

Worked examples showing anticipated impacts on Assistance payments

The following examples set out some potential scenarios where the actuarial factors may be used. They highlight the impact on member's Assistance of using the proposed revised factors compared to those currently in use by the FAS scheme manager.

The following examples are based on the illustrative factors in **Annex C.** The final factors will depend on the market yields that are used to calculate the factors and the factors will not be known until after the date at which these yields are selected. The changes from the illustrative factors shown in this document will be very small for notional annuity factors once the market value adjustments are taken account of. The changes from the illustrative factors are likely to be bigger for commutation, ill health early retirement and tranching factors.

Please note that rounded factors have been used throughout.

It should also be noted that the lump sum examples illustrate the differences that can arise under the different bases. Past lump sum payments are used in order that actual yields can be applied. However, in line with the proposals in the consultation if a lump sum or other payment has been made by a scheme before the basis is changed the current basis will be used when calculating assistance. Thus any differences that will have an actual effect on members will only arise in cases where lump sums are taken after the basis is changed.

Example 1

Notional Annuity – Pensioner – Aged 65 – non-indexed

Andrew took a lump sum from his scheme of £75,000 on Wednesday 30 September 2009[4]. He was 65 at the time.

His full scheme entitlement was a pension of £16,607 a year. The scheme commutation factor was 14 and he commuted the HMRC maximum. His full pension entitlement after commutation was £11,250 a year. His Expected Pension was £16,607 (the pension before commutation) and 90 per cent of that is £14,946. When Andrew's scheme transfers assets, the Notional Pension calculated is much smaller than the standard assistance.

The central factor for Andrew under the current basis is 17.27 and under the proposed basis is 14.15.

The yields as at 30 September 2009 shown in the Financial Times on Thursday 1 October 2009 were as follows:

	semi-annualised	**annualised**
FTSE UK Gilts Indices yields ten years (current basis):	3.59%	3.62%
FTSE UK Gilts Indices yields fifteen years (proposed basis):	3.91%	3.95%

Under the current basis the fixed-interest yield to be used to determine the post retirement MVA is 3.62 per cent. This corresponds to a non-indexed post-retirement MVA of 1.10.

Under the proposed basis the fixed-interest yield to be used to determine the post retirement MVA is 3.95 per cent. This corresponds to a non-indexed post-retirement MVA of 1.06.

Under the current basis the non-indexed notional annuity factor is 17.27 x 1.10 = 19.00. If Andrew's lump sum related entirely to pre-1997 (and therefore non-indexed) service, then the notional annuity would be £75,000 / 19.00 = £3,947

Under the proposed basis the illustrative non-indexed notional annuity factor is 14.15 x 1.06 = 15.00 If Andrew's lump sum related entirely to pre-1997 (and therefore non-indexed) service, then the notional annuity would be £75,000 / 15.00 = £5,000.

Under the current basis, Andrew's Assistance is £14,946 - £3,947 = £10,999.

[4] The proposed basis will not be used for lump sums paid before it is implemented. However, since this is a future date and the yields are not yet know, a date in the past has been used for the purpose of this example.

Under the proposed basis, his Assistance is £14,946 - £5,000 = £9,946

The illustrative factor calculated on the proposed basis produces a notional annuity that is around 27 per cent larger than under the current basis. **This leads to a smaller assistance payment. The amount of the reduction in Assistance will be the same as the increase in the Notional Annuity. The percentage reduction in Assistance in this case is 10 per cent. If Andrew had taken a smaller lump sum, this percentage would be smaller.**

Example 2

Tranching – tranche accrued to an age before NRA

Baljeet is a member with NRA 65 who had a tranche of benefit that his scheme would have paid at 60 without reduction. He was aged 45 when the scheme started winding-up.

Expected Pension payable by scheme at 60	= £1,000 a year as at date of start of wind-up	
Expected Pension payable by scheme at 65	= £4,000 a year as at date of start of wind-up	
Normal Retirement Age in FAS	= age 65	
	Current Factor	**Illustrative Factor**
Factor for age 60 tranche	1.162	1.130
Uplifted age 60 tranche	= £1,000 x 1.162 = £1,162 a year	= £1,000 x 1.130 = £1,130 a year
Total Expected Pension payable at age 65 as at date of start of wind-up	£5,162 a year	£5,130 a year
If Baljeet starts receiving FAS at NRA		
Revaluation from start of wind-up to NRA	1.80	1.80
Expected Pension at NRA	= £5,162 x 1.8 = £9,292 a year	= £5,130 x 1.8 = £9,234 a year

The part of the expected pension that has been adjusted is around 3 per cent lower under the illustrative factors, although the overall effect on the expected pension at NRA will depend on the proportion of the expected pension that is subject to a tranching factor. **Tranches that are uplifted are lower using the illustrative factors. The effect may be different when the final factors are used depending on the market yields used to calculate the final factors.**

Example 3

Tranching – Tranche accrued to an age after NRA

Charlie is a member with NRA 62 who had a tranche of benefit that his scheme would have paid at 65 without reduction. He was aged 45 when the scheme started winding-up.

Expected Pension payable by scheme at 65	= £1,000 a year as at date of start of wind-up	
Expected Pension payable by scheme at 62	= £4,000 a year as at date of start of wind-up	
Normal Retirement Age in FAS	= age 62	
	Current Factor	**Illustrative Factor**
Factor for age 65 tranche	0.912	0.927
Down-rated age 65 tranche	= £1,000 x 0.912 = £912 a year	= £1,000 x 0.927 = £927 a year
Total Expected Pension payable at age 62 as at date of start of wind-up	£4,912 a year	£4,927 a year
If Charlie starts receiving FAS at NRA		
Revaluation from start of wind-up to NRA	1.80	1.80
Expected Pension at NRA	= £4,912 x 1.8 = £8,842 a year	= £4,927 x 1.8 = £8,869 a year

The part of the expected pension that has been adjusted is around 2 per cent higher under the illustrative factors, although the overall effect on the expected pension at NRA will depend on the proportion of the expected pension that is subject to a tranching factor. **Tranches that are adjusted downwards are higher under the illustrative factors. The effect may be different when the final factors are used depending on the market yields used to calculate the final factors.**

Example 4

Commutation of FAS assistance

Two examples are provided in this section. These examples can be considered as showing the range of outcomes that may arise as a consequence of the revision to the basis. As such the members present reasonably extreme cases. In practice it is expected that most members will fall somewhere between these extremes.

Under the Regulations, the maximum commutation lump sum that a member can take is the lower of

1. 25 per cent of the sum of 20 times the Assistance after commutation and the lump sum (which is broadly in line with HMRC maximum lump sum limits);
2. the Notional Pension converted into a lump sum using the commutation factors.

The limit on the maximum lump sum in (1) above can be calculated using the following formula:

20 x Assistance before commutation / (3 + 20 / factor)

It is proposed that commutation factors will be unisex.

Commutation Example A – member aged 65 – high notional pension

Dyonne is entitled to the greater of her normal assistance and the Notional Pension calculated from her asset share re-valued to FAS date of entitlement.

Dyonne's normal assistance at FAS date of entitlement is £10,000.

Her Notional Pension calculated from her asset share is £8,000.

Dyonne's entitlement at FAS date of entitlement is therefore £10,000.

In this example, Dyonne's assistance consists of £5,000 pa non-increasing entitlement and £5,000 pa increasing entitlement.

Current basis

On the current basis, the commutation factor in respect of non-increasing assistance would be 17.04 and the commutation factor in respect of increasing assistance would be 24.12.

An average commutation factor can be calculated as:

(£5,000 / £10,000 x 17.04) + (£5,000/ £10,000 x 24.12) = 20.58

The FAS maximum lump sum available in this case would be the lower of:

1. 20 x (£5,000 + £5,000) / (3 + 20 / 20.58) = £50,355

2. £8,000 x 20.58 = £164,640

The maximum commutation lump sum that Dyonne can take is therefore £50,355.

If Dyonne then took the maximum permitted lump sum her assistance, after commutation, would be £7,553 per year (= £10,000 - £50,355 / 20.58).

Illustrative Factors

On the proposed basis, the illustrative commutation factor in respect of non-increasing assistance is 13.94 and the illustrative commutation factor in respect of increasing assistance is 18.40.

An average commutation factor can be calculated as:

(£5,000 / £10,000 x 13.94) + (£5,000 / £10,000 x 18.40) = 16.17

The FAS maximum lump sum available in this case is the lower of:

1. 20 x (£5,000 + £5,000) / (3 + 20 / 16.17) = £47,205

2. £8,000 x 16.17 = £129,360

The maximum commutation lump sum that Dyonne can take is therefore £47,205.

If she then took the maximum permitted lump sum her assistance, after commutation, would be £7,081 per year (= £10,000 - £47,205 / 16.17).

The maximum lump sum may be different when the final factors are used depending on the market yields used to calculate the final factors.

Commutation Example B – member aged 65 – low notional pension

In practice the notional pension will also be affected by the change in basis. This second example shows a member for whom the notional pension does affect the lump sum. The calculation of the notional pension depends on the member's asset share which itself depends on all the other members in the scheme. This example shows a very simple scheme with just two members.

Background and calculations unaffected by basis change

The XYZ Pension Scheme (the "Scheme") has two members – Edward and Felix.

XYZ Ltd, the sponsoring employer, became insolvent on 31 October 2003 and the Scheme entered wind-up.

The FAS valuation is carried out with a calculation date of 31 October 2010. There are assets of £200,000 available for members at this date. Market conditions on the calculation date are assumed to be such that the yield on fixed interest gilts is 4.5 per cent and the yield on index linked gilts is 1.0 per cent.

Both members only have service prior to 6 April 1997 and are not entitled to any pension increases from the scheme. Edward was a pensioner when the scheme started winding-up. He was receiving a pension of £15,000 a year at that point. The scheme continued to pay him £15,000 a year during wind-up. Edward's standard assistance would be £13,500 a year (£15,000 x 0.9). Edward is aged 75 at the calculation date

Felix was a deferred member at the start of wind-up. His pension re-valued to the start of wind-up was £15,000 a year; this is the same as his Expected Pension. Revaluation from the start of wind-up to the Calculation Date is assumed to be 25 per cent. Felix's expected pension re-valued to calculation date is £18,750 a year (£15,000 x 1.25). He is aged 45 at the Calculation Date and his NRA is 65. Revaluation from the Calculation Date to NRA is assumed to be 80 per cent. Re-valued to NRA, Expected Pension is £33,750 a year (£18,750 x 1.8). His normal assistance at date of entitlement will be £30,375 (£33,750 x 0.9).

Calculations on the current basis

The following calculations would be carried out if the current basis were used.

EDWARD

As a pensioner, Edward ranks first in the wind-up priority order. There are sufficient funds in the scheme for Edward to be fully funded. His asset share is £197,400 and the Notional Pension arising from this is £15,000 a year, which is the same as his Expected Pension. His entitlement will be the £15,000 Notional Pension rather than the standard assistance of £13,500. He was paid his full entitlement of £15,000 a year during wind-up, so there are no arrears to be paid to him or excess payments to be recovered.

FELIX

After deducting Edward's asset share from the available assets, Felix has an asset share of £2,600 (£200,000 less £197,400).

The valuation factor for a member aged 45 on the current basis is 16.77. Therefore, Felix's Notional Pension calculated from his asset share is £155 (£2,600 / 16.77). Re-valued from Calculation Date to NRA, his notional pension will be £279 (£155 x 1.8).

Felix is entitled to the greater of his normal assistance and notional pension at FAS date of entitlement. His entitlement at FAS date of entitlement is therefore £30,375 (the normal assistance).

The illustrative commutation factor at age 65 calculated on the current basis is 17.04.

The maximum lump sum that Felix can take is the lower of:

1) 20 x pension / (3 + 20 / factor); and
2) notional pension x factor.

For Felix, the lump sum under calculation (1) is £145,554 (20 x £30,375 / (3 + 20 / 17.04)) and under calculation (2) is £4,754 (£279 x 17.04). Therefore, the maximum lump sum that he can take is **£4,754**.

If the maximum lump sum is taken, the residual assistance is **£30,096** (£30,375 – (£4,754 / 17.04)).

Calculations on the proposed basis

The following calculations are reworked on the proposed basis.

EDWARD

The valuation factors are lower on the proposed basis. This means that Edward's asset share is £160,950. As before, this is sufficient to provide him with a Notional Pension of £15,000 a year.

FELIX

The proposed basis results in a lower asset share for Edward. After deducting Edward's asset share from the available assets, Felix has an increased asset share of £39,050 (£200,000 less £160,950).

The valuation factor for a member aged 45 on the proposed basis is 12.58. Therefore, Felix's Notional Pension calculated from his asset share is £3,104 (£39,050 / 12.58). Re-valued from the Calculation Date to NRA, his Notional Pension will be £5,587 (£3,104 x 1.8).

As before, Felix is entitled to the greater of his normal assistance and notional pension at FAS date of entitlement. His entitlement at FAS date of entitlement is again £30,375 (the normal assistance).

The illustrative commutation factor at age 65 calculated on the proposed basis is 13.94.

For Felix, the lump sum under 1 is £136,987 (20 x £30,375 / (3 + 20 / 13.94)) and under 2 is £77,883 (£5,587 x 13.94). Therefore, the maximum lump sum that he can take is **£77,883**.

If the maximum lump sum is taken, the residual assistance is **£24,788** (£30,375 – (£77,883 / 13.94)).

Summary

Edward receives the same assistance (£15,000 a year) under the current and proposed bases.

Felix's entitlement is unaffected by the change in basis. However, because the proposed basis results in a larger asset share and therefore notional pension, Felix can take a larger lump sum. This is despite the proposed basis resulting in less generous commutation factors.

The table below summarises Felix's entitlement at FAS NRA under both bases:

	Current Basis	**Proposed Basis**
Normal assistance	£30,375 a year	£30,375 a year
Notional pension	£279 a year	£5,587 a year
Assistance before commutation	£30,375 a year	£30,375 a year
Maximum lump sum available	£4,754	£77,883
Residual assistance after commutation	£30,096 a year	£24,788 a year

Example 5

Ill-Health early retirement

Gareth was born on 16 January 1951, and has a scheme Normal Retirement Age (NRA) of 65. He becomes eligible to access his FAS payments early on account of ill health five years before reaching his NRA; on his 60th birthday on 16 January 2011. Gareth applies immediately for early access at that time.

Gareth's entitlement to FAS assistance, as at the date he reaches age 60 is calculated by taking 90 per cent of his 'expected pension' (and if the scheme is purchasing annuities, subtracting any actual payments his scheme has agreed to pay), subject to the cap. This gives a total (unreduced) FAS payment of approximately £2,730.

This amount is then actuarially reduced using an early retirement factor to reflect the fact that it is being paid early. The early retirement factor used depends on the member's NRA and their age in years and complete months at the time the FAS payments will be accessed – age 60 in this case.

The reduction factor for a member with an NRA of 65 who accesses FAS payments aged 60 exactly is 0.858 under the current basis and 0.877 using the illustrative factors calculated on the proposed basis using central yields.

This is the actuarial reduction factor required to apply to Gareth's FAS assistance as at the date ill-health payments commence. He would therefore be entitled to FAS assistance, paid from 16 January 2011, at the rate of £2,342 (£2,730 x 0.858 = £2,342) under the current basis or £2,394 (£2,730 x 0.877 = £2,394) under the illustrative factors, assuming no scheme payment has been made to him.

Using the illustrative factors would result in assistance around 2 per cent higher than under the current basis. The effect may be different when the final factors are used depending on the market yields used to calculate the final factors.

Annex C

Illustrative factors for Market Value Adjustment (MVA)

The FAS basis will be based on market yields on gilt indices on the date at which these rates are to be selected. The following examples of illustrative factors are calculated using the proposed FAS basis assuming that the appropriate fixed-interest yield is 4.5 per cent a year and the appropriate index-linked yield is 1 per cent a year on this day. The final factors will not be known until after the date at which these rates are to be selected.

Comparison of notional annuity factors

Non-indexed post retirement MVA – illustrative factors using central yields of 4.5 per cent and 1 per cent

Basis	**Non-indexed Annuities**		**Indexed Annuities**	
	Illustrative Factors	**Current Factors**	**Illustrative Factors**	**Current Factors**
Immediate annuities				
Age Last Birthday				
80 (no guarantee)	8.77	10.75	10.30	13.24
75 (no guarantee)	10.73	13.16	13.08	16.95
70 (no guarantee)	12.51	15.32	15.84	20.65
65 (5 year guarantee where applicable)	14.15	17.27	18.58	24.31
60 (5 year guarantee where applicable)	15.46	18.89	21.07	27.82
55 (5 year guarantee where applicable)	16.52	20.29	23.30	31.21
50 (5 year guarantee where applicable)	17.34	21.45	25.27	34.41
Deferred annuities (NRA = 65, 5-year guarantee from that age where applicable)				
Age Last Birthday				
60	13.81	16.44	18.28	23.47
55	13.36	15.49	17.76	22.33
50	12.96	14.63	17.30	21.31
45	12.58	13.83	16.88	20.34
40	12.22	13.07	16.48	19.40
35	11.88	12.34	16.10	18.48
30	11.55	11.63	15.74	17.58
25	11.24	10.96	15.39	16.69
20	-	10.31	-	15.83

Yield on fixed interest gilt index	**Factor**
3.00% to 3.06%	1.17
3.07% to 3.14%	1.16
3.15% to 3.22%	1.15
3.23% to 3.30%	1.14
3.31% to 3.38%	1.13
3.39% to 3.46%	1.12
3.47% to 3.54%	1.11
3.55% to 3.63%	1.10
3.64% to 3.71%	1.09
3.72% to 3.80%	1.08
3.81% to 3.89%	1.07
3.90% to 3.98%	1.06
3.99% to 4.07%	1.05
4.08% to 4.16%	1.04
4.17% to 4.25%	1.03
4.26% to 4.35%	1.02
4.36% to 4.45%	1.01
4.46% to 4.54%	1.00
4.55% to 4.65%	0.99
4.66% to 4.75%	0.98
4.76% to 4.85%	0.97
4.86% to 4.96%	0.96
4.97% to 5.07%	0.95
5.08% to 5.18%	0.94
5.19% to 5.29%	0.93
5.30% to 5.40%	0.92
5.41% to 5.52%	0.91
5.53% to 5.64%	0.90
5.65% to 5.76%	0.89
5.77% to 5.88%	0.88
5.89% to 6.01%	0.87
6.02% to 6.13%	0.86
6.14% to 6.26%	0.85
6.27% to 6.40%	0.84

Indexed post retirement MVA – illustrative factors using central yields of 4.5 per cent and 1 per cent

Adjusted yield	Factor	Adjusted yield	Factor
0.57% to 0.62%	1.30	3.08% to 3.16%	0.94
0.63% to 0.67%	1.29	3.17% to 3.25%	0.93
0.68% to 0.73%	1.28	3.26% to 3.35%	0.92
0.74% to 0.78%	1.27	3.36% to 3.44%	0.91
0.79% to 0.84%	1.26	3.45% to 3.54%	0.90
0.85% to 0.90%	1.25	3.55% to 3.64%	0.89
0.91% to 0.96%	1.24	3.65% to 3.74%	0.88
0.97% to 1.02%	1.23	3.75% to 3.85%	0.87
1.03% to 1.08%	1.22	3.86% to 3.95%	0.86
1.09% to 1.14%	1.21	3.96% to 4.06%	0.85
1.15% to 1.20%	1.20	4.07% to 4.17%	0.84
1.21% to 1.26%	1.19	4.18% to 4.28%	0.83
1.27% to 1.33%	1.18	4.29% to 4.39%	0.82
1.34% to 1.39%	1.17	4.40% to 4.51%	0.81
1.40% to 1.46%	1.16		
1.47% to 1.52%	1.15		
1.53% to 1.59%	1.14		
1.60% to 1.66%	1.13		
1.67% to 1.73%	1.12		
1.74% to 1.80%	1.11		
1.81% to 1.87%	1.10		
1.88% to 1.94%	1.09		
1.95% to 2.01%	1.08		
2.02% to 2.09%	1.07		
2.10% to 2.16%	1.06		
2.17% to 2.24%	1.05		
2.25% to 2.31%	1.04		
2.32% to 2.39%	1.03		
2.40% to 2.47%	1.02		
2.48% to 2.55%	1.01		
2.56% to 2.64%	1.00		
2.65% to 2.72%	0.99		
2.73% to 2.81%	0.98		
2.82% to 2.89%	0.97		
2.90% to 2.98%	0.96		
2.99% to 3.07%	0.95		

Pre Retirement Indexed Linked Gilt MVA – illustrative factors using central yields of 4.5 per cent and 1 per cent

			Yield on index-linked gilt index								
Years to scheme pension age			**0.00%**	**0.50%**	**1.00%**	**1.50%**	**2.00%**	**2.50%**	**3.00%**	**3.50%**	**4.00%**
42	**years or less and more than**	**41**	149.75%	122.25%	100.00%	82.00%	67.25%	55.50%	45.75%	37.75%	31.25%
41	**years or less and more than**	**40**	148.25%	121.75%	100.00%	82.25%	68.00%	56.25%	46.50%	38.75%	32.25%
40	**years or less and more than**	**39**	146.75%	121.00%	100.00%	82.75%	68.50%	57.00%	47.25%	39.50%	33.00%
39	**years or less and more than**	**38**	145.50%	120.50%	100.00%	83.00%	69.25%	57.75%	48.25%	40.50%	34.00%
38	**years or less and more than**	**37**	144.00%	120.00%	100.00%	83.50%	69.75%	58.50%	49.00%	41.25%	34.75%
37	**years or less and more than**	**36**	142.75%	119.50%	100.00%	84.00%	70.50%	59.25%	50.00%	42.25%	35.75%
36	**years or less and more than**	**35**	141.25%	118.75%	100.00%	84.25%	71.25%	60.25%	51.00%	43.25%	36.75%
35	**years or less and more than**	**34**	140.00%	118.25%	100.00%	84.75%	71.75%	61.00%	51.75%	44.25%	37.75%
34	**years or less and more than**	**33**	138.75%	117.75%	100.00%	85.00%	72.50%	61.75%	52.75%	45.25%	38.75%
33	**years or less and more than**	**32**	137.25%	117.25%	100.00%	85.50%	73.25%	62.75%	53.75%	46.25%	39.75%
32	**years or less and more than**	**31**	136.00%	116.50%	100.00%	86.00%	73.75%	63.50%	54.75%	47.25%	41.00%
31	**years or less and more than**	**30**	134.75%	116.00%	100.00%	86.25%	74.50%	64.50%	55.75%	48.50%	42.00%
30	**years or less and more than**	**29**	133.50%	115.50%	100.00%	86.75%	75.25%	65.50%	56.75%	49.50%	43.25%
29	**years or less and more than**	**28**	132.25%	115.00%	100.00%	87.00%	76.00%	66.25%	58.00%	50.75%	44.50%
28	**years or less and more than**	**27**	131.00%	114.25%	100.00%	87.50%	76.75%	67.25%	59.00%	51.75%	45.50%
27	**years or less and more than**	**26**	129.75%	113.75%	100.00%	88.00%	77.50%	68.25%	60.25%	53.00%	47.00%
26	**years or less and more than**	**25**	128.50%	113.25%	100.00%	88.25%	78.25%	69.25%	61.25%	54.25%	48.25%
25	**years or less and more than**	**24**	127.25%	112.75%	100.00%	88.75%	79.00%	70.25%	62.50%	55.50%	49.50%
24	**years or less and more than**	**23**	126.00%	112.25%	100.00%	89.25%	79.75%	71.25%	63.50%	57.00%	51.00%
23	**years or less and more than**	**22**	124.75%	111.75%	100.00%	89.75%	80.50%	72.25%	64.75%	58.25%	52.50%
22	**years or less and more than**	**21**	123.50%	111.00%	100.00%	90.00%	81.25%	73.25%	66.00%	59.75%	54.00%
21	**years or less and more than**	**20**	122.25%	110.50%	100.00%	90.50%	82.00%	74.25%	67.25%	61.00%	55.50%
20	**years or less and more than**	**19**	121.25%	110.00%	100.00%	91.00%	82.75%	75.25%	68.50%	62.50%	57.00%
19	**years or less and more than**	**18**	120.00%	109.50%	100.00%	91.25%	83.50%	76.50%	70.00%	64.00%	58.75%
18	**years or less and more than**	**17**	118.75%	109.00%	100.00%	91.75%	84.25%	77.50%	71.25%	65.50%	60.25%
17	**years or less and more than**	**16**	117.75%	108.50%	100.00%	92.25%	85.25%	78.50%	72.75%	67.25%	62.00%
16	**years or less and more than**	**15**	116.50%	108.00%	100.00%	92.75%	86.00%	79.75%	74.00%	68.75%	63.75%
15	**years or less and more than**	**14**	115.50%	107.50%	100.00%	93.25%	86.75%	81.00%	75.50%	70.50%	65.75%
14	**years or less and more than**	**13**	114.25%	106.75%	100.00%	93.50%	87.75%	82.00%	77.00%	72.00%	67.50%
13	**years or less and more than**	**12**	113.25%	106.25%	100.00%	94.00%	88.50%	83.25%	78.50%	73.75%	69.50%
12	**years or less and more than**	**11**	112.00%	105.75%	100.00%	94.50%	89.25%	84.50%	80.00%	75.75%	71.50%
11	**years or less and more than**	**10**	111.00%	105.25%	100.00%	95.00%	90.25%	85.75%	81.50%	77.50%	73.75%
10	**years or less and more than**	**9**	109.75%	104.75%	100.00%	95.50%	91.00%	87.00%	83.00%	79.50%	75.75%
9	**years or less and more than**	**8**	108.75%	104.25%	100.00%	96.00%	92.00%	88.25%	84.75%	81.25%	78.00%
8	**years or less and more than**	**7**	107.75%	103.75%	100.00%	96.50%	93.00%	89.50%	86.50%	83.25%	80.50%
7	**years or less and more than**	**6**	106.75%	103.25%	100.00%	96.75%	93.75%	91.00%	88.00%	85.25%	82.75%
6	**years or less and more than**	**5**	105.50%	102.75%	100.00%	97.25%	94.75%	92.25%	89.75%	87.50%	85.25%
5	**years or less and more than**	**4**	104.50%	102.25%	100.00%	97.75%	95.75%	93.50%	91.50%	89.50%	87.75%
4	**years or less and more than**	**3**	103.50%	101.75%	100.00%	98.25%	96.50%	95.00%	93.50%	91.75%	90.25%
3	**years or less and more than**	**2**	102.50%	101.25%	100.00%	98.75%	97.50%	96.50%	95.25%	94.00%	93.00%
2	**years or less and more than**	**1**	101.50%	100.75%	100.00%	99.25%	98.50%	97.75%	97.00%	96.50%	95.75%
1	**year or less**		100.50%	100.25%	100.00%	99.75%	99.50%	99.25%	99.00%	98.75%	98.50%

Tranching Factors – illustrative factors on proposed basis using central yields of 4.5 per cent and 1 per cent

Age payable by scheme	Normal Retirement Age															
	60	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**
50	1.215	1.243	1.273	1.304	1.338	1.373	1.411	1.452	1.495	1.542	1.592	1.645	1.703	1.765	1.832	1.904
51	1.194	1.222	1.251	1.282	1.315	1.350	1.387	1.427	1.470	1.515	1.564	1.617	1.673	1.734	1.800	1.871
52	1.173	1.200	1.229	1.259	1.292	1.326	1.363	1.402	1.444	1.489	1.537	1.589	1.644	1.704	1.768	1.838
53	1.152	1.179	1.207	1.237	1.269	1.302	1.339	1.377	1.418	1.462	1.509	1.560	1.615	1.673	1.737	1.805
54	1.131	1.157	1.185	1.214	1.245	1.279	1.314	1.352	1.392	1.435	1.482	1.531	1.585	1.642	1.705	1.772
55	1.110	1.135	1.162	1.191	1.222	1.254	1.289	1.326	1.366	1.408	1.453	1.502	1.555	1.611	1.672	1.738
56	1.088	1.113	1.140	1.168	1.198	1.230	1.264	1.300	1.339	1.381	1.425	1.473	1.524	1.580	1.640	1.704
57	1.066	1.091	1.117	1.145	1.174	1.205	1.239	1.274	1.312	1.353	1.397	1.444	1.494	1.548	1.607	1.670
58	1.044	1.069	1.094	1.121	1.150	1.181	1.213	1.248	1.285	1.325	1.368	1.414	1.463	1.516	1.574	1.636
59	1.022	1.046	1.071	1.097	1.126	1.156	1.187	1.222	1.258	1.297	1.339	1.384	1.432	1.484	1.540	1.601
60	1.000	1.023	1.047	1.073	1.101	1.130	1.161	1.195	1.230	1.269	1.309	1.353	1.401	1.452	1.506	1.566
61	0.977	1.000	1.024	1.049	1.076	1.105	1.135	1.168	1.203	1.240	1.280	1.323	1.369	1.419	1.472	1.530
62	0.955	0.977	1.000	1.025	1.051	1.079	1.109	1.141	1.175	1.211	1.250	1.292	1.337	1.385	1.438	1.494
63	0.932	0.953	0.976	1.000	1.026	1.053	1.082	1.113	1.146	1.182	1.220	1.261	1.305	1.352	1.403	1.458
64	0.908	0.929	0.951	0.975	1.000	1.027	1.055	1.085	1.117	1.152	1.189	1.229	1.272	1.318	1.368	1.422
65	0.885	0.905	0.927	0.950	0.974	1.000	1.028	1.057	1.089	1.122	1.158	1.197	1.239	1.284	1.332	1.385
66	0.861	0.881	0.902	0.924	0.948	0.973	1.000	1.029	1.059	1.092	1.127	1.165	1.206	1.249	1.297	1.348
67	0.837	0.856	0.877	0.899	0.922	0.946	0.972	1.000	1.030	1.062	1.096	1.132	1.172	1.214	1.260	1.310
68	0.813	0.832	0.852	0.873	0.895	0.919	0.944	0.971	1.000	1.031	1.064	1.100	1.138	1.179	1.224	1.272
69	0.789	0.807	0.826	0.846	0.868	0.891	0.916	0.942	0.970	1.000	1.032	1.067	1.104	1.144	1.187	1.234
70	0.764	0.782	0.800	0.820	0.841	0.863	0.887	0.913	0.940	0.969	1.000	1.033	1.069	1.108	1.150	1.195
71	0.739	0.756	0.775	0.794	0.814	0.836	0.859	0.883	0.909	0.937	0.968	1.000	1.035	1.072	1.113	1.157
72	0.715	0.731	0.748	0.767	0.787	0.807	0.830	0.853	0.879	0.906	0.935	0.966	1.000	1.036	1.075	1.118
73	0.690	0.706	0.722	0.740	0.759	0.779	0.801	0.824	0.848	0.874	0.902	0.933	0.965	1.000	1.038	1.078
74	0.665	0.680	0.696	0.713	0.732	0.751	0.772	0.794	0.817	0.843	0.870	0.899	0.930	0.964	1.000	1.039
75	0.640	0.654	0.670	0.686	0.704	0.723	0.743	0.764	0.786	0.811	0.837	0.865	0.895	0.927	0.962	1.000